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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,852	02/11/2004	Tadashi Shintani	TWA100USA	3887

270 7590 03/01/2005

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EXAMINER
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ESHETE, ZELALEM

ART UNIT	PAPER NUMBER
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3748

DATE MAILED: 03/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/776,852

Applicant(s)

SHINTANI, TADASHI

Examiner

Zelalem Eshete

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9/30/2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

This Office Action is in response to the amendment filed on 1/18/2005.

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1,3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimano et al. (5,216,984) in view of Bianchi (EP 1046790).

Shimano discloses a camshaft drive for an engine (see figure 1) comprising: crankshaft sprocket (see numeral 9); a large camshaft sprocket and a small camshaft sprocket, said large and small camshaft sprockets being in coaxial relationship with each other, and fixedly connected to each other rotation together about a first axis (see numerals 11,12); a third camshaft sprocket, spaced laterally from said large and small camshaft sprockets, and rotatable about a second axis parallel to said first axis (see numeral 14); a driving chain wrapped around the crankshaft sprocket and said large camshaft sprocket, for transmitting rotational power from the crankshaft sprocket to said large camshaft sprocket (see numeral 7); and driven chain wrapped around said small camshaft sprocket and said third camshaft sprocket, for transmitting rotational power from said small camshaft sprocket to said third camshaft sprocket (see numeral 15).

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Shimano fails to disclose the strength of said driven chain is less than the strength of said driving chain, and the pitch of said driven chain is smaller than the pitch of said driving chain.

Bianchi teaches the strength of said driven chain is less than the strength of said driving chain, and the pitch of said driven chain is smaller than the pitch of said driving chain, in that Bianchi discloses the driven chain may be sized for less power and therefore have a smaller pitch than the driving chain (see abstract, paragraph 0017). Bianchi further teaches that the pitch of the chain is substantially imposed by the power transmitted (see paragraph 0005).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the chains of Shimano by providing less strength/pitch for the driven chains compared to the driving chains as taught by Bianchi in order to optimize the device by implementing chains designed on the basis of power transmission as taught by Bianchi.

Regarding claim 3: Shimano discloses said crankshaft sprocket and said large camshaft sprocket constitute all of the sprockets around which said driving chain is wrapped (see figure 1)

### ***Response to Arguments***

3. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

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4. With regard to applicant's argument on page 6: Shimano discloses the driving chain is wrapped around the crankshaft sprocket and the large camshaft sprocket (see figure 1).

### ***Conclusion***

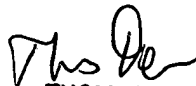
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zelalem Eshete whose telephone number is (571) 272-4860. The examiner can normally be reached on Monday to Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Zelalem Eshete  
Examiner  
Art Unit 3748



  
**THOMAS DENION**  
SUPERVISORY PATENT EXAMINER  
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